

INVENTOR SEARCH

=> fil medl pascal caba wpix biotechno biosis lifesci confsci capl dissabs embase;
d que 112

FILE 'MEDLINE' ENTERED AT 11:46:58 ON 27 DEC 2006

FILE 'PASCAL' ENTERED AT 11:46:58 ON 27 DEC 2006

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=> d que 16; d que 115

L1 619 SEA GILULA N/AU OR GILULA NB/AU OR GILULA N B/AU OR GILULA
NORTON?/AU

L2 673 SEA CRAVATT B/AU OR CRAVATT BF/AU OR CRAVATT B F/AU OR CRAVATT
BENJAMIN?/AU

L3 2601 SEA LERNER R/AU OR LERNER RA/AU OR LERNER R A/AU OR LERNER
RICH?/AU

L6 35 SEA L1 AND L2 AND L3

L1 619 SEA GILULA N/AU OR GILULA NB/AU OR GILULA N B/AU OR GILULA
NORTON?/AU

L2 673 SEA CRAVATT B/AU OR CRAVATT BF/AU OR CRAVATT B F/AU OR CRAVATT
BENJAMIN?/AU

L3 2601 SEA LERNER R/AU OR LERNER RA/AU OR LERNER R A/AU OR LERNER
RICH?/AU

L5 1164 SEA FAAH

L10 1837 SEA FATTY-ACID AMIDE HYDROLASE
 L15 25 SEA ((L1 AND (L2 OR L3)) OR (L2 AND L3)) AND (L5 OR L10)

=> s 16,115
 L28 41 (L6 OR L15)

=> s 128 not 122,125
 L29 40 L28 NOT (L22 OR L25)

=> dup rem 129
 PROCESSING COMPLETED FOR L29
 L30 14 DUP REM L29 (26 DUPLICATES REMOVED)
 ANSWERS '1-5' FROM FILE MEDLINE
 ANSWERS '6-7' FROM FILE WPIX
 ANSWERS '8-11' FROM FILE BIOSIS
 ANSWER '12' FROM FILE CONFSCI
 ANSWERS '13-14' FROM FILE CAPLUS

=> d iall 1-5; d iall abeq tech 6-7; d iall 8-12; d ibib ed abs hitind 13-14; fil
 hom

L30 ANSWER 1 OF 14 MEDLINE on STN DUPLICATE 2
 ACCESSION NUMBER: 1998226723 MEDLINE Full-text
 DOCUMENT NUMBER: PubMed ID: 9560184
 TITLE: Chemical requirements for inhibition of gap junction
 communication by the biologically active lipid oleamide.
 AUTHOR: Boger D L; Patterson J E; Guan X; Cravatt B F;
 Lerner R A; Gilula N B
 CORPORATE SOURCE: Department of Chemistry, The Scripps Research Institute,
 10550 North Torrey Pines Road, La Jolla, CA 92037, USA..
 boger@scripps.edu
 CONTRACT NUMBER: CA42056 (NCI)
 SOURCE: Proceedings of the National Academy of Sciences of the
 United States of America, (1998 Apr 28) Vol. 95, No. 9, pp.
 4810-5.
 Journal code: 7505876. ISSN: 0027-8424.
 PUB. COUNTRY: United States
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 199806
 ENTRY DATE: Entered STN: 11 Jun 1998
 Last Updated on STN: 11 Jun 1998
 Entered Medline: 4 Jun 1998

ABSTRACT:

Oleamide is an endogenous fatty acid primary amide that possesses sleep-inducing properties in animals and has been shown to effect serotonergic systems and block gap junction communication in a structurally specific manner. Herein, the structural features of oleamide required for inhibition of the gap junction-mediated chemical and electrical transmission in rat glial cells are defined. The effective inhibitors fall into two classes of fatty acid primary amides of which oleamide and arachidonamide are the prototypical members. Of these two, oleamide constitutes the most effective, and its structural requirements for inhibition of the gap junction are well defined. It requires a chain length of 16-24 carbons of which 16-18 carbons appears optimal, a polarized terminal carbonyl group capable of accepting but not necessarily donating a hydrogen bond, a Delta9 cis double bond, and a hydrophobic methyl terminus. Within these constraints, a range of modifications are possible, many of which may be expected to improve in vivo properties. A select set of

agents has been identified that serves both as oleamide agonists and as inhibitors of **fatty acid amide hydrolase**

, which is responsible for the rapid inactivation of oleamide.

CONTROLLED TERM: Amidehydrolases: ME, metabolism
 Animals
 *Cell Communication: DE, drug effects
 Cells, Cultured
 *Gap Junctions: DE, drug effects
 Isomerism
 Neuroglia: DE, drug effects
 Oleic Acids: CH, chemistry
 Oleic Acids: ME, metabolism
 *Oleic Acids: PD, pharmacology
 Rats
 Research Support, Non-U.S. Gov't
 Research Support, U.S. Gov't, Non-P.H.S.
 Research Support, U.S. Gov't, P.H.S.
 Structure-Activity Relationship

CAS REGISTRY NO.: 301-02-0 (oleylamide)
 CHEMICAL NAME: 0 (Oleic Acids); EC 3.5. (Amidehydrolases); EC 3.5.1.- (fatty-acid amide hydrolase)

L30 ANSWER 2 OF 14 MEDLINE on STN DUPLICATE 3
 ACCESSION NUMBER: 1998075090 MEDLINE Full-text
 DOCUMENT NUMBER: PubMed ID: 9412472
 TITLE: The sleep-inducing lipid oleamide deconvolutes gap junction communication and calcium wave transmission in glial cells.
 AUTHOR: Guan X; Cravatt B F; Ehring G R; Hall J E; Boger D L; Lerner R A; Gilula N B
 CORPORATE SOURCE: Department of Cell Biology, The Scripps Research Institute, La Jolla, California 92037, USA.
 SOURCE: The Journal of cell biology, (1997 Dec 29) Vol. 139, No. 7, pp. 1785-92.
 Journal code: 0375356. ISSN: 0021-9525.
 PUB. COUNTRY: United States
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 199802
 ENTRY DATE: Entered STN: 17 Feb 1998
 Last Updated on STN: 17 Feb 1998
 Entered Medline: 5 Feb 1998

ABSTRACT:

Oleamide is a sleep-inducing lipid originally isolated from the cerebrospinal fluid of sleep-deprived cats. Oleamide was found to potently and selectively inactivate gap junction-mediated communication between rat glial cells. In contrast, oleamide had no effect on mechanically stimulated calcium wave transmission in this same cell type. Other chemical compounds traditionally used as inhibitors of gap junctional communication, like heptanol and 18beta-glycyrrhetic acid, blocked not only gap junctional communication but also intercellular calcium signaling. Given the central role for intercellular small molecule and electrical signaling in central nervous system function, oleamide-induced inactivation of glial cell gap junction channels may serve to regulate communication between brain cells, and in doing so, may influence higher order neuronal events like sleep induction.

CONTROLLED TERM: Animals
 *Calcium: ME, metabolism
 *Cell Communication: DE, drug effects
 Cell Line

Connexin 43: ME, metabolism
 Connexins: GE, genetics
 Connexins: ME, metabolism
 Cricetinae
 Fluorescent Dyes: ME, metabolism
 Gap Junctions: DE, drug effects
 *Gap Junctions: PH, physiology
 Isoquinolines: ME, metabolism
 Neuroglia: CY, cytology
 Neuroglia: DE, drug effects
 *Neuroglia: ME, metabolism
 *Oleic Acids: PD, pharmacology
 Phosphorylation
 Rats
 Research Support, Non-U.S. Gov't
 Research Support, U.S. Gov't, Non-P.H.S.
 Research Support, U.S. Gov't, P.H.S.
 Sleep
 Structure-Activity Relationship

CAS REGISTRY NO.: 301-02-0 (oleylamide); 7440-70-2 (Calcium); 77944-88-8 (lucifer yellow)
 CHEMICAL NAME: 0 (Connexin 43); 0 (Connexins); 0 (Fluorescent Dyes); 0 (Isoquinolines); 0 (Oleic Acids); 0 (connexin 32)

L30 ANSWER 3 OF 14 MEDLINE on STN DUPLICATE 4
 ACCESSION NUMBER: 1998112399 MEDLINE Full-text
 DOCUMENT NUMBER: PubMed ID: 9452020
 TITLE: **Fatty acid amide hydrolase**, the degradative enzyme for anandamide and oleamide, has selective distribution in neurons within the rat central nervous system.
 AUTHOR: Thomas E A; Cravatt B F; Danielson P E; Gilula N B; Sutcliffe J G
 CORPORATE SOURCE: Department of Molecular Biology, The Scripps Research Institute, La Jolla, California 92037, USA.
 CONTRACT NUMBER: GM32355 (NIGMS)
 SOURCE: Journal of neuroscience research, (1997 Dec 15) Vol. 50, No. 6, pp. 1047-52.
 Journal code: 7600111. ISSN: 0360-4012.
 PUB. COUNTRY: United States
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 199803
 ENTRY DATE: Entered STN: 12 Mar 1998
 Last Updated on STN: 12 Mar 1998
 Entered Medline: 4 Mar 1998

ABSTRACT:

Fatty acid amide hydrolase (FAAH) is a membrane-bound enzyme activity that degrades neuromodulatory fatty acid amides, including oleamide and anandamide. A single 2.5-kb **FAAH** mRNA is distributed throughout the rat CNS and accumulates progressively between embryonic day 14 and postnatal day 10, remains high until postnatal day 30, then decreases into adulthood. **FAAH** enzymatic activity, as measured in dissected brain regions, was well correlated with the distribution of its messenger RNA. In situ hybridization revealed profound distribution of **FAAH** mRNA in neuronal cells throughout the CNS. The most prominent signals were detected in the neocortex, hippocampal formation, amygdala, and cerebellum. The **FAAH** distribution in the CNS suggests that degradation of neuromodulatory fatty acid amides at their sites of action

influences their effects on sleep, euphoria, and analgesia.

CONTROLLED TERM: Check Tags: Male
 *Amidohydrolases: AN, analysis
 Amidohydrolases: GE, genetics
 Animals
 *Arachidonic Acids: ME, metabolism
 Blotting, Northern
 *Central Nervous System: CH, chemistry
 In Situ Hybridization
 *Neurons: ME, metabolism
 *Oleic Acids: ME, metabolism
 *RNA, Messenger: AN, analysis
 Rats
 Rats, Sprague-Dawley
 Research Support, U.S. Gov't, P.H.S.
 CAS REGISTRY NO.: 301-02-0 (oleylamide); 94421-68-8 (anandamide)
 CHEMICAL NAME: 0 (Arachidonic Acids); 0 (Oleic Acids); 0 (RNA, Messenger);
 EC 3.5. (Amidohydrolases); EC 3.5.1.- (fatty-
 acid amide hydrolase)

L30 ANSWER 4 OF 14 MEDLINE on STN DUPLICATE 6
 ACCESSION NUMBER: 97055939 MEDLINE Full-text
 DOCUMENT NUMBER: PubMed ID: 8900284
 TITLE: Molecular characterization of an enzyme that degrades
 neuromodulatory fatty-acid amides.
 AUTHOR: Cravatt B F; Giang D K; Mayfield S P; Boger D L;
 Lerner R A; Gilula N B
 CORPORATE SOURCE: Department of Chemistry, The Scripps Research Institute, La
 Jolla, California 92037, USA.
 SOURCE: Nature, (1996 Nov 7) Vol. 384, No. 6604, pp. 83-7.
 Journal code: 0410462. ISSN: 0028-0836.
 PUB. COUNTRY: ENGLAND: United Kingdom
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 OTHER SOURCE: GENBANK-U72497
 ENTRY MONTH: 199612
 ENTRY DATE: Entered STN: 28 Jan 1997
 Last Updated on STN: 28 Jan 1997
 Entered Medline: 10 Dec 1996

ABSTRACT:

Endogenous neuromodulatory molecules are commonly coupled to specific metabolic enzymes to ensure rapid signal inactivation. Thus, acetylcholine is hydrolysed by acetylcholine esterase and tryptamine neurotransmitters like serotonin are degraded by monoamine oxidases. Previously, we reported the structure and sleep-inducing properties of cis-9-octadecenamide, a lipid isolated from the cerebrospinal fluid of sleep-deprived cats. cis-9-Octadecenamide, or oleamide, has since been shown to affect serotonergic systems and block gap-junction communication in glial cells (our unpublished results). We also identified a membrane-bound enzyme activity that hydrolyses oleamide to its inactive acid, oleic acid. We now report the mechanism-based isolation, cloning and expression of this enzyme activity, originally named oleamide hydrolase, from rat liver plasma membranes. We also show that oleamide hydrolase converts anandamide, a fatty-acid amide identified as the endogenous ligand for the cannabinoid receptor, to arachidonic acid, indicating that oleamide hydrolase may serve as the general inactivating enzyme for a growing family of bioactive signalling molecules, the fatty-acid amides. Therefore we will hereafter refer to oleamide hydrolase as fatty-acid amide

hydrolase, in recognition of the plurality of fatty-acid amides that the enzyme can accept as substrates.

CONTROLLED TERM: *Amides: ME, metabolism
 . Amidohydrolases: GE, genetics
 . Amidohydrolases: IP, isolation & purification
 *Amidohydrolases: ME, metabolism
 Amino Acid Sequence
 Animals
 Arachidonic Acids: ME, metabolism
 Blotting, Northern
 Blotting, Southern
 COS Cells
 Cell Membrane: EN, enzymology
 Chromatography, Affinity
 Cloning, Molecular
 *Fatty Acids: ME, metabolism
 *Liver: EN, enzymology
 Molecular Sequence Data
 Rats
 Sequence Homology, Amino Acid

CAS REGISTRY NO.: 94421-68-8 (anandamide)
 CHEMICAL NAME: 0 (Amides); 0 (Arachidonic Acids); 0 (Fatty Acids); EC 3.5.
 (Amidohydrolases); EC 3.5.1.- (fatty-acid
 amide hydrolase)

L30 ANSWER 5 OF 14 MEDLINE on STN DUPLICATE 7
 ACCESSION NUMBER: 95288645 MEDLINE Full-text
 DOCUMENT NUMBER: PubMed ID: 7770779
 TITLE: Chemical characterization of a family of brain lipids that
 induce sleep.
 AUTHOR: Cravatt B F; Prospero-Garcia O; Siuzdak G;
 Gilula N B; Henriksen S J; Boger D L; Lerner R
 A
 CORPORATE SOURCE: Department of Chemistry, Scripps Research Institute, La
 Jolla, CA 92307, USA.
 CONTRACT NUMBER: 1 S10 RR07273-01 (NCRR)
 SOURCE: Science, (1995 Jun 9) Vol. 268, No. 5216, pp. 1506-9.
 Journal code: 0404511. ISSN: 0036-8075.
 PUB. COUNTRY: United States
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 199507
 ENTRY DATE: Entered STN: 13 Jul 1995
 Last Updated on STN: 6 Feb 1998
 Entered Medline: 5 Jul 1995

ABSTRACT:

A molecule isolated from the cerebrospinal fluid of sleep-deprived cats has been chemically characterized and identified as cis-9,10-octadecenoamide. Other fatty acid primary amides in addition to cis-9,10-octadecenoamide were identified as natural constituents of the cerebrospinal fluid of cat, rat, and human, indicating that these compounds compose a distinct family of brain lipids. Synthetic cis-9,10-octadecenoamide induced physiological sleep when injected into rats. Together, these results suggest that fatty acid primary amides may represent a previously unrecognized class of biological signaling molecules.

CONTROLLED TERM: Animals
 *Brain Chemistry
 Cats
 *Cerebrosides: CF, cerebrospinal fluid
 Cerebrosides: CH, chemistry
 Cerebrosides: PD, pharmacology

Humans
 *Lipids: CF, cerebrospinal fluid
 Lipids: CH, chemistry
 Lipids: PD, pharmacology
 Magnetic Resonance Spectroscopy
 Molecular Weight
 *Oleic Acids: CF, cerebrospinal fluid
 Oleic Acids: CH, chemistry
 Oleic Acids: PD, pharmacology
 Rats
 Research Support, Non-U.S. Gov't
 Research Support, U.S. Gov't, Non-P.H.S.
 Research Support, U.S. Gov't, P.H.S.
 Signal Transduction
 *Sleep
 Sleep: DE, drug effects
 Spectrometry, Mass, Fast Atom Bombardment
 Spectrophotometry, Infrared
 Spectrum Analysis, Mass
 CAS REGISTRY NO.: 301-02-0 (oleylamide)
 CHEMICAL NAME: 0 (Cerebrosides); 0 (Lipids); 0 (Oleic Acids)

L30 ANSWER 6 OF 14 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN
 DUPLICATE 1
 ACCESSION NUMBER: 1999-347603 [29] WPIX
 DOC. NO. CPI: C1999-102314 [29]
 TITLE: Oleamide agonists and fatty acid
 amide hydrolase inhibitors
 DERWENT CLASS: B05
 INVENTOR: BOGER D; BOGER D L; CRAVATT B; CRAVATT B
 F; GILULA N; GILULA N B;
 LERNER R; LERNER R A; BOGER L; CRAVATT
 F; GILULA B; LERNER A
 PATENT ASSIGNEE: (SCRI-C) SCRIPPS RES INST
 COUNTRY COUNT: 81

PATENT INFORMATION:

| PATENT NO | KIND | DATE | WEEK | LA | PG | MAIN IPC |
|---------------|------|----------|-----------|----|---------|------------|
| WO 9926584 | A2 | 19990603 | (199929)* | EN | 106[22] | A61K000-00 |
| AU 9915973 | A | 19990615 | (199944) | EN | | A61K000-00 |
| EP 1039902 | A2 | 20001004 | (200050) | EN | | A61K031-40 |
| US 6251931 | B1 | 20010626 | (200138) | EN | | A61K031-40 |
| AU 740588 | B | 20011108 | (200176) | EN | | A61K031-40 |
| JP 2001523695 | W | 20011127 | (200204) | JA | 105 | C07C047-21 |
| EP 1039902 | B1 | 20060308 | (200618) | EN | | |
| DE 69833791 | E | 20060504 | (200634) | DE | | |

APPLICATION DETAILS:

| PATENT NO | KIND | APPLICATION | DATE |
|------------|------|-----------------|----------|
| WO 9926584 | A2 | WO 1998-US24913 | 19981124 |
| EP 1039902 | A2 | EP 1998-960363 | 19981124 |
| EP 1039902 | B1 | EP 1998-960363 | 19981124 |
| EP 1039902 | A2 | WO 1998-US24913 | 19981124 |

| | |
|-----------------|--------------------------|
| US 6251931 B1 | WO 1998-US24913 19981124 |
| JP 2001523695 W | WO 1998-US24913 19981124 |
| EP 1039902 B1 | WO 1998-US24913 19981124 |
| AU 9915973 A | AU 1999-15973 19981124 |
| AU 740588 B | AU 1999-15973 19981124 |
| JP 2001523695 W | JP 2000-521789 19981124 |
| US 6251931 B1 | US 2000-529909 20000419 |
| DE 69833791 E | DE 1998-633791 19981124 |
| DE 69833791 E | EP 1998-960363 19981124 |
| DE 69833791 E | WO 1998-US24913 19981124 |

FILING DETAILS:

| PATENT NO | KIND | | PATENT NO | |
|---------------|------|---------------|------------|---|
| AU 740588 | B | Previous Publ | AU 9915973 | A |
| AU 9915973 | A | Based on | WO 9926584 | A |
| EP 1039902 | A2 | Based on | WO 9926584 | A |
| US 6251931 | B1 | Based on | WO 9926584 | A |
| AU 740588 | B | Based on | WO 9926584 | A |
| JP 2001523695 | W | Based on | WO 9926584 | A |
| EP 1039902 | B1 | Based on | WO 9926584 | A |
| DE 69833791 | E | Based on | EP 1039902 | A |
| DE 69833791 | E | Based on | WO 9926584 | A |

PRIORITY APPLN. INFO: US 1997-977493 19971124
US 2000-529909 20000419

INT. PATENT CLASSIF.:

MAIN: A61K; A61K031-40; C07C047-21

SECONDARY: A01N043-36; A61K031-16; A61K031-201; A61K031-231;
A61K031-27; C07C233-00; C07C233-09; C07C233-10;
C07C233-11; C07C233-20; C07C233-49; C07C235-06;
C07C235-28; C07C235-76; C07C237-22; C07C243-30;
C07C245-14; C07C259-06; C07C271-10; C07C275-20;
C07C323-60; C07C327-32; C07C049-227; C07C057-12;
C07C059-00; C07C069-58; C07D207-00; C07D295-00;
C07D295-18

IPC ORIGINAL: A61K0031-40 [I,A]; A61P0029-00 [I,A]; A61K0031-40 [I,A];
A61P0029-00 [I,A]

BASIC ABSTRACT:

WO 1999026584 A2 UPAB: 20060315

NOVELTY - Compounds with oleamide agonist activity are used for inhibiting gap junction-mediated chemical and electrical transmission in glial cells.

DETAILED DESCRIPTION - The compounds are oleamide analogs of formula (I):

X = cis- or trans-1,2-ethenylene, ethynylene, trans-1,2- cyclopropylene or trans-2,3-(1-oxa)cyclopropylene; Y = CH₂, CH(CH₃), C(CH₃)₂, O, NH, CH(SH), CHSAC, CH(OH), CHCl, C(O), C(O)CH₂, CH₂NHC(O) or CH₂N(CH₃)C(O); R₁ = H, NH₂, OH, MeNH, Me₂N, EtNH, Et₂N, CH=CHCH₂NH, n-propyl-NH, i-propyl-NH, cyclopropyl-NH, i-propyl-NMe, butyl-NH, pyrrolidine, phenyl-NH, phenyl(CH₂)₃NH, HONH, MeONMe, NH₂NH, CH₃O, CH₃CH₂O, CH₃(CH₂)O, Me₂CHCH₂O, H, CF₃, BrCH₂, ClCH₂, N₂CH, HOCH₂CH₂NH, (HOCH₂CH₂)₂N, HOCH₂CH₂CH₂NH or HOCH₂CH(OAc)CH₂O; R₂ = CH₃, (CH₂)₂CH₃, (CH₂)₄CH₃, (CH₂)₆CH₃, CH₂OCH₃, CH₂OH, CONH₂ or CO₂H; n, m = 0-15, and n+m = 11-15; provided that:

- (i) if Y = CH₃, n = 4, m = 7 and R₂ = CH₃, then R₁ is not CF₃ or H;
- (ii) if Y = CH₂, n = 5, m = 7 and R₂ = CH₃, then R₁ is not CF₃, CH₂Cl, NHOH, C(O)NH₂, CN₂ or C(O)OEt; (iii) if Y = CH₂Cl, n = 4, m = 7 and R₂ = CH₃, then R₁ is not NH₂; (iv) if Y = CH(OH), n = 4, m = 7 and R₂ = CH₃, then R₁ is not NH₂; (v) if Y = C(O), n = 4, m = 7 and R₂ = CH₃, then R₁ is not NH₂ or CH₃CH₂O; and
- (vi) if Y = CH₂, n = 4-9, m = 4-7 and R₂ = CH₃, then R₁ is not NH₂ or OH.

ACTIVITY - Neuromodulatory; sleep disorders; mood disorders; analgesia.
 MECHANISM OF ACTION - Oleamide agonist; **fatty acid amide hydrolase** inhibitor.
 USE - Analogs for oleamide, an endogenous fatty acid primary amide that possesses sleep-inducing properties in animals known to affect serotonergic systems and blocking gap junction communication in a structurally specific manner. Used to inhibit gap junction-mediated chemical and electrical transmission in glial cells (claimed). Used to help distinguish among mechanisms for gap junction inhibition by oleamide and as new neuromodulatory agents applicable to sleep or mood disorders, analgesia, and disorders associated with higher neuronal function. Act as fluidity transmitters.

ADVANTAGE - Storage and release may be controlled in a manner analogous to that of short peptide hormones and messengers terminating in a primary amide.

MANUAL CODE: CPI: B07-A03; B10-B04B; B10-C02; B10-C04; B10-D01;
 B10-D03; B10-E04D; B10-F02; B10-G02; B14-C01; B14-J01;
 B14-J01B2

Member(0003)

ABEQ EP 1039902 A2 UPAB 20060315

NOVELTY - Compounds with oleamide agonist activity are used for inhibiting gap junction-mediated chemical and electrical transmission in glial cells.

DETAILED DESCRIPTION - The compounds are oleamide analogs of formula (I):

X = cis- or trans-1,2-ethenylene, ethynylene, trans-1,2-cyclopropylene or trans-2,3-(1-oxa)cyclopropylene;

Y = CH₂; CH(CH₃), C(CH₃)₂, O, NH, CH(SH), CHSAC, CH(OH), CHCl, C(O), C(O)CH₂, CH₂NHC(O) or CH₂N(CH₃)C(O);

R₁ = H, NH₂, OH, MeNH, Me₂N, EtNH, Et₂N, CH=CHCH₂NH, n-propyl-NH, i-propyl-NH, cyclopropyl-NH, i-propyl-NMe, butyl-NH, pyrrolidine, phenyl-NH, phenyl(CH₂)₃NH, HONH, MeONMe, NH₂NH, CH₃O, CH₃CH₂O, CH₃(CH₂)O, Me₂CHCH₂O, H, CF₃, BrCH₂, ClCH₂, N₂CH, HOCH₂CH₂NH, (HOCH₂CH₂)₂N, HOCH₂CH₂CH₂NH or HOCH₂CH(OAc)CH₂O;

R₂ = CH₃, (CH₂)₂CH₃, (CH₂)₄CH₃, (CH₂)₆CH₃, CH₂OCH₃, CH₂OH, CONH₂ or CO₂H;

n, m = 0-15, and n+m = 11-15;

provided that:

- (i) if Y = CH₃, n = 4, m = 7 and R₂ = CH₃, then R₁ is not CF₃ or H;
- (ii) if Y = CH₂, n = 5, m = 7 and R₂ = CH₃, then R₁ is not CF₃, CH₂Cl, NHOH, C(O)NH₂, CN₂ or C(O)OEt;
- (iii) if Y = CH₂Cl, n = 4, m = 7 and R₂ = CH₃, then R₁ is not NH₂;
- (iv) if Y = CH(OH), n = 4, m = 7 and R₂ = CH₃, then R₁ is not NH₂;
- (v) if Y = C(O), n = 4, m = 7 and R₂ = CH₃, then R₁ is not NH₂ or CH₃CH₂O; and
- (vi) if Y = CH₂, n = 4-9, m = 4-7 and R₂ = CH₃, then R₁ is not NH₂ or OH.

ACTIVITY - Neuromodulatory; sleep disorders; mood disorders; analgesia.

MECHANISM OF ACTION - Oleamide agonist; **fatty acid amide hydrolase** inhibitor.

USE - Analogs for oleamide, an endogenous fatty acid primary amide that possesses sleep-inducing properties in animals known to affect serotonergic systems and blocking gap junction communication in a structurally specific manner. Used to inhibit gap junction-mediated chemical and electrical transmission in glial cells (claimed). Used to help distinguish among mechanisms for gap junction inhibition by oleamide and as new neuromodulatory agents applicable to sleep or mood disorders, analgesia, and disorders associated with higher neuronal function. Act as fluidity transmitters.

ADVANTAGE - Storage and release may be controlled in a manner analogous to that of short peptide hormones and messengers terminating in

a primary amide.

Member(0004)

ABEQ US 6251931 B1 UPAB 20060315

NOVELTY - Compounds with oleamide agonist activity are used for inhibiting gap junction-mediated chemical and electrical transmission in glial cells.

DETAILED DESCRIPTION - The compounds are oleamide analogs of formula (I):

X = cis- or trans-1,2-ethenylene, ethynylene, trans-1,2-cyclopropylene or trans-2,3-(1-oxa)cyclopropylene;

Y = CH₂, CH(CH₃), C(CH₃)₂, O, NH, CH(SH), CHSAc, CH(OH), CHCl, C(O), C(O)CH₂, CH₂NHC(O) or CH₂N(CH₃)C(O);

R₁ = H, NH₂, OH, MeNH, Me₂N, EtNH, Et₂N, CH=CHCH₂NH, n-propyl-NH, i-propyl-NH, cyclopropyl-NH, i-propyl-NMe, butyl-NH, pyrrolidine, phenyl-NH, phenyl(CH₂)₃NH, HONH, MeONMe, NH₂NH, CH₃O, CH₃CH₂O, CH₃(CH₂)O, Me₂CHCH₂O, H, CF₃, BrCH₂, ClCH₂, N₂CH, HOCH₂CH₂NH, (HOCH₂CH₂)₂N, HOCH₂CH₂CH₂NH or HOCH₂CH(OAc)CH₂O;

R₂ = CH₃, (CH₂)₂CH₃, (CH₂)₄CH₃, (CH₂)₆CH₃, CH₂OCH₃, CH₂OH, CONH₂ or CO₂H;

n, m = 0-15, and n+m = 11-15;

provided that:

- (i) if Y = CH₃, n = 4, m = 7 and R₂ = CH₃, then R₁ is not CF₃ or H;
- (ii) if Y = CH₂, n = 5, m = 7 and R₂ = CH₃, then R₁ is not CF₃, CH₂Cl, NHOH, C(O)NH₂, CN₂ or C(O)OEt;
- (iii) if Y = CH₂Cl, n = 4, m = 7 and R₂ = CH₃, then R₁ is not NH₂;
- (iv) if Y = CH(OH), n = 4, m = 7 and R₂ = CH₃, then R₁ is not NH₂;
- (v) if Y = C(O), n = 4, m = 7 and R₂ = CH₃, then R₁ is not NH₂ or CH₃CH₂O; and
- (vi) if Y = CH₂, n = 4-9, m = 4-7 and R₂ = CH₃, then R₁ is not NH₂ or OH.

ACTIVITY - Neuromodulatory; sleep disorders; mood disorders; analgesia.

MECHANISM OF ACTION - Oleamide agonist; **fatty acid amide hydrolase inhibitor.**

USE - Analogs for oleamide, an endogenous fatty acid primary amide that possesses sleep-inducing properties in animals known to affect serotonergic systems and blocking gap junction communication in a structurally specific manner. Used to inhibit gap junction-mediated chemical and electrical transmission in glial cells (claimed). Used to help distinguish among mechanisms for gap junction inhibition by oleamide and as new neuromodulatory agents applicable to sleep or mood disorders, analgesia, and disorders associated with higher neuronal function. Act as fluidity transmitters.

ADVANTAGE - Storage and release may be controlled in a manner analogous to that of short peptide hormones and messengers terminating in a primary amide.

TECH

ORGANIC CHEMISTRY - Preparation:

- (i) tertiary-butyl diphenylsilyl (TBDS) chloride, triethylamine, 4-N,N'-dimethylaminopyridine (yield 92%);
- (ii) triphenylphosphine (yield 96%);
- (iii) potassium hexadimethylsilazide; pentadecanal (yield 55%);
- (iv) tertiary butyl ammonium fluoride (yield 68%);
- (v) pyridinium dichromate, dimethylformamide (yield 76%);
- (vi) (COCl)₂; ammonium hydroxide (yield 67%).

L30 ANSWER 7 OF 14 WPIX COPYRIGHT 2006
DUPLICATE 5

THE THOMSON CORP on STN

ACCESSION NUMBER: 1997-065456 [06] WPIX

CROSS REFERENCE: 1998-286935
 DOC. NO. CPI: C1997-021584 [06]
 TITLE: Purified cis-9,10-octadeceno:amidase - useful for
 hydrolysing sleep-inducing fatty acid primary amide(s),
 and identifying inhibitors
 DERWENT CLASS: B04; B05; D16
 INVENTOR: CRAVATT B F; GILULA N B; LERNER
 R A
 PATENT ASSIGNEE: (SCRI-C) SCRIPPS RES INST
 COUNTRY COUNT: 70

PATENT INFORMATION:

| PATENT NO | KIND | DATE | WEEK | LA | PG | MAIN IPC |
|-------------|------|----------|-----------|----|--------|------------|
| WO 9641869 | A1 | 19961227 | (199706)* | EN | 101[8] | C12N009-78 |
| AU 9661144 | A | 19970109 | (199717) | EN | | C12N009-78 |
| EP 833899 | A1 | 19980408 | (199818) | EN | [0] | C12N009-78 |
| JP 11507554 | W | 19990706 | (199937) | JA | 78 | C12N015-00 |
| AU 725984 | B | 20001026 | (200059) | EN | | C12N009-78 |
| EP 833899 | B1 | 20050119 | (200506) | EN | | |
| DE 69634203 | E | 20050224 | (200516) | DE | | |
| DE 69634203 | T2 | 20060105 | (200607) | DE | | |

APPLICATION DETAILS:

| PATENT NO | KIND | APPLICATION | DATE |
|----------------|------|------------------|----------|
| WO 9641869 A1 | | WO 1996-US10435 | 19960612 |
| AU 9661144 A | | AU 1996-61144 | 19960612 |
| AU 725984 B | | AU 1996-61144 | 19960612 |
| DE 69634203 E | | DE 1996-69634203 | 19960612 |
| EP 833899 A1 | | EP 1996-918507 | 19960612 |
| EP 833899 B1 | | EP 1996-918507 | 19960612 |
| DE 69634203 E | | EP 1996-918507 | 19960612 |
| EP 833899 A1 | | WO 1996-US10435 | 19960612 |
| JP 11507554 W | | WO 1996-US10435 | 19960612 |
| EP 833899 B1 | | WO 1996-US10435 | 19960612 |
| DE 69634203 E | | WO 1996-US10435 | 19960612 |
| JP 11507554 W | | JP 1997-503386 | 19960612 |
| DE 69634203 T2 | | DE 1996-69634203 | 19960612 |
| DE 69634203 T2 | | EP 1996-918507 | 19960612 |
| DE 69634203 T2 | | WO 1996-US10435 | 19960612 |

FILING DETAILS:

| PATENT NO | KIND | PATENT NO |
|----------------|---------------|--------------|
| AU 725984 B | Previous Publ | AU 9661144 A |
| DE 69634203 E | Based on | EP 833899 A |
| AU 9661144 A | Based on | WO 9641869 A |
| EP 833899 A1 | Based on | WO 9641869 A |
| JP 11507554 W | Based on | WO 9641869 A |
| AU 725984 B | Based on | WO 9641869 A |
| EP 833899 B1 | Based on | WO 9641869 A |
| DE 69634203 E | Based on | WO 9641869 A |
| DE 69634203 T2 | Based on | EP 833899 A |
| DE 69634203 T2 | Based on | WO 9641869 A |

PRIORITY APPLN. INFO: US 1995-489535 19950612

INT. PATENT CLASSIF.:

MAIN: C12N015-00; C12N009-78
 SECONDARY: A61K031-12; A61K038-46; C12N009-14; C12N009-80;
 C12N009-99; C12P007-64
 IPC RECLASSIF.: A61K0038-43 [,C]; A61K0038-46 [,A]; C12N0009-14 [,A];
 C12N0009-78 [,A]; C12N0009-80 [,A]; C12P0007-64 [,A]

BASIC ABSTRACT:

WO 1996041869 A1 UPAB: 20050826 Novel purified form of cis-9,10-octadecenoamidase (COase) is obtd. by a chromatographic methodology selected from affinity, electric, gel filtration, ion exchange and partition chromatography, and is characterised by enzymic activity for catalysing the conversion of cis-9,10-octadecenoamide (CO) to oleic acid and by inclusion of an amino acid sequence selected from (a)-(aa),
 (a)GGSSGGEGALIGSGGSPLGLGTDIGGSIRFP, (b) SPGGSSGGEGALIGS, (c) ALIGSGGSPLGLGTD, (d) GLGTDIGGSIRFP, (e) RFPSAFCGICGLKPT, (f) GLKPTGNRLSKSGLK, (g) KSGLKGCYVYGQTAVQ, (h) QTAVQLSLGPMARDV, (i) MARDVESLALCLKAL, (j) CLKALLCEHLFTLDP, (k) FTLDPTVPPFPREE, (l) PFREEVYRSSRPLRV, (m) RPLRVGYETDNYTM, (n) DNYTMPSPAMRRALI, (o) RRALIETKQRLAAG, (p) LEAAGHTLIPFLPNN, (q) FLPNNIPYALEVLSA, (r) EVLSAGGLFSDGGRS, (s) DGGRSFLQNKKGDFV, (t) KGDFVDPCLGDLILI, (u) DLILILRLPSWFKRL, (v) WFKRLSLLKPLFP, (w) KPLFPRLAAFLNSMR, (x) LNSMRPRSAEKLWKL, (y) KLWKLQHEIEMYRQS, (z) MYRQSVIAQWKAMNL, (aa) KAMNLDVLLTPMLGP, and (ab) PMLGPALDLNTPGR.

USE - The COase can be used to catalyse the hydrolysis of fatty acid primary amides, which have sleep-inducing activity. The COase can also be used to identify inhibitors of the COase activity. MANUAL CODE: CPI: B04-C01; B04-L05; B12-K04A; D05-C03C; D05-H12A;

D05-H17A3

Member(0003)

ABEQ EP 833899 A1 UPAB 20050826

Novel purified form of cis-9,10-octadecenoamidase (COase) is obtd. by a chromatographic methodology selected from affinity, electric, gel filtration, ion exchange and partition chromatography, and is characterised by enzymic activity for catalysing the conversion of cis-9,10-octadecenoamide (CO) to oleic acid and by inclusion of an amino acid sequence selected from (a)-(aa), (a)GGSSGGEGALIGSGGSPLGLGTDIGGSIRFP, (b) SPGGSSGGEGALIGS, (c) ALIGSGGSPLGLGTD, (d) GLGTDIGGSIRFP, (e) RFPSAFCGICGLKPT, (f) GLKPTGNRLSKSGLK, (g) KSGLKGCYVYGQTAVQ, (h) QTAVQLSLGPMARDV, (i) MARDVESLALCLKAL, (j) CLKALLCEHLFTLDP, (k) FTLDPTVPPFPREE, (l) PFREEVYRSSRPLRV, (m) RPLRVGYETDNYTM, (n) DNYTMPSPAMRRALI, (o) RRALIETKQRLAAG, (p) LEAAGHTLIPFLPNN, (q) FLPNNIPYALEVLSA, (r) EVLSAGGLFSDGGRS, (s) DGGRSFLQNKKGDFV, (t) KGDFVDPCLGDLILI, (u) DLILILRLPSWFKRL, (v) WFKRLSLLKPLFP, (w) KPLFPRLAAFLNSMR, (x) LNSMRPRSAEKLWKL, (y) KLWKLQHEIEMYRQS, (z) MYRQSVIAQWKAMNL, (aa) KAMNLDVLLTPMLGP, and (ab) PMLGPALDLNTPGR.

USE - The COase can be used to catalyse the hydrolysis of fatty acid primary amides, which have sleep-inducing activity. The COase can also be used to identify inhibitors of the COase activity.

Member(0004)

ABEQ JP 11507554 W UPAB 20050826

Novel purified form of cis-9,10-octadecenoamidase (COase) is obtd. by a chromatographic methodology selected from affinity, electric, gel filtration, ion exchange and partition chromatography, and is characterised by enzymic activity for catalysing the conversion of cis-9,10-octadecenoamide (CO) to oleic acid and by inclusion of an amino acid sequence selected from (a)-(aa), (a)GGSSGGEGALIGSGGSPLGLGTDIGGSIRFP, (b) SPGGSSGGEGALIGS, (c) ALIGSGGSPLGLGTD, (d) GLGTDIGGSIRFP, (e) RFPSAFCGICGLKPT, (f) GLKPTGNRLSKSGLK, (g) KSGLKGCYVYGQTAVQ, (h) QTAVQLSLGPMARDV, (i) MARDVESLALCLKAL, (j) CLKALLCEHLFTLDP, (k)

FTLDPTVPPFPREE, (l) PFREEVYRSSRPLRV, (m) RPLRVGYETDNYTM, (n) DNYTMPSPAMRRALI, (o) RRALIETKQRLEAAG, (p) LEAAGHTLIPFLPNN, (q) FLPNNIPYALEVLSA, (r) EVLSAGGLFSDGGRS, (s) DGGRSFLQNKKGDFV, (t) KGDFVDPCLGDLILI, (u) DLILILRLPSWFKRL, (v) WFKRLLSLLLKPLFP, (w) KPLFPRLAAFLNSMR, (x) LNSMRPRSAEKLWKL, (y) KLWKLOHEIEMYRQS, (z) MYRQSVIAQWKAMNL, (aa) KAMNLDVLLTPMLGP, and (ab) PMLGPALDLNTPGR.

USE - The COase can be used to catalyse the hydrolysis of fatty acid primary amides, which have sleep-inducing activity. The COase can also be used to identify inhibitors of the COase activity.

L30 ANSWER 8 OF 14 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
 ACCESSION NUMBER: 2004:186194 BIOSIS Full-text
 DOCUMENT NUMBER: PREV200400190623
 TITLE: Assay for inhibitors of **fatty-acid amide hydrolase**.
 AUTHOR(S): Gilula, Norton B. [Inventor, Reprint Author]; Cravatt, Benjamin F. [Inventor]; Lerner, Richrd A. [Inventor]
 CORPORATE SOURCE: La Jolla, CA, USA
 ASSIGNEE: The Scripps Research Institute
 PATENT INFORMATION: US 6699682 20040302
 SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Mar 2 2004) Vol. 1280, No. 1.
<http://www.uspto.gov/web/menu/patdata.html>. e-file.
 ISSN: 0098-1133 (ISSN print).
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 ENTRY DATE: Entered STN: 7 Apr 2004
 Last Updated on STN: 7 Apr 2004
 ABSTRACT: The soporific activity of cis-9,10-octadecenoamide and other soporific fatty acid primary amides is neutralized by hydrolysis in the presence of ***fatty***-acid **amide hydrolase (FAAH)**). Hydrolysis of cis-9,10-octadecenoamide by **FAAH** leads to the formation of oleic acid, a compound without soporific activity. **FAAH** has been isolated and the gene encoding **FAAH** has been cloned, sequenced, and used to express recombinant **FAAH**. Inhibitors of ***FAAH*** are disclosed to block the hydrolase activity.
 NAT. PATENT. CLASSIF.: 435018000
 CONCEPT CODE: Genetics - General 03502
 Biochemistry studies - Nucleic acids, purines and pyrimidines 10062
 Pathology - Therapy 12512
 Pharmacology - General 22002
 INDEX TERMS: Major Concepts
 Methods and Techniques; Molecular Genetics (Biochemistry and Molecular Biophysics); Pharmacology
 INDEX TERMS: Chemicals & Biochemicals
 cis-9,10-octadecenoamide: soporific activity;
fatty-acid amide hydrolase;
fatty-acid amide hydrolase; **fatty-acid amide hydrolase** inhibitors: enzyme
 inhibitor-drug; soporific fatty acid primary amides
 INDEX TERMS: Methods & Equipment
fatty-acid amide hydrolase inhibitor assay: laboratory techniques
 REGISTRY NUMBER: 301-02-0 (cis-9,10-octadecenoamide)
 153301-19-0 (**fatty-acid amide**)

GENE NAME: hydrolase)
 FAAH gene [fatty-acid
 amide hydrolase gene]: nucleotide
 sequence

L30 ANSWER 9 OF 14 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
 ACCESSION NUMBER: 1997:142732 BIOSIS Full-text
 DOCUMENT NUMBER: PREV199799441935
 TITLE: Electron cryo-crystallography reveals that oleamide, a
 sleep inducing compound, causes structural changes of a gap
 junction channel.
 AUTHOR(S): Unger, V. M.; Entrikin, D. W.; Guan, X.; Cravatt,
 B.; Kumar, N. M.; Lerner, R. A.;
 Gilula, N. B.; Yeager, M.
 CORPORATE SOURCE: Scripps Res. Inst., La Jolla, CA 92037, USA
 SOURCE: Biophysical Journal, (1997) Vol. 72, No. 2 PART 2, pp.
 A291.
 Meeting Info.: 41st Annual Meeting of the Biophysical
 Society. New Orleans, Louisiana, USA. March 2-6, 1997.
 CODEN: BIOJAU. ISSN: 0006-3495.
 DOCUMENT TYPE: Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 Conference; (Meeting Poster)
 LANGUAGE: English
 ENTRY DATE: Entered STN: 2 Apr 1997
 Last Updated on STN: 2 May 1997
 CONCEPT CODE: General biology - Symposia, transactions and proceedings
 00520
 Cytology - Animal 02506
 Biochemistry studies - Proteins, peptides and amino acids
 10064
 Biochemistry studies - Lipids 10066
 Biophysics - Molecular properties and macromolecules
 10506
 Biophysics - Membrane phenomena 10508
 INDEX TERMS: Major Concepts
 Biochemistry and Molecular Biophysics; Cell Biology;
 Membranes (Cell Biology)
 INDEX TERMS: Chemicals & Biochemicals
 OLEAMIDE
 INDEX TERMS: Miscellaneous Descriptors
 ALPHA-CONNEXIN; ANALYTICAL METHOD; BHK CELL LINE;
 BIOCHEMISTRY AND BIOPHYSICS; CRYSTALLOGRAPHY; GAP
 JUNCTION CHANNEL; LIPID; MEMBRANES; OLEAMIDE;
 SLEEP-INDUCING COMPOUND; STRUCTURAL CHANGES
 ORGANISM: Classifier
 Cricetidae 86310
 Super Taxa
 Rodentia; Mammalia; Vertebrata; Chordata; Animalia
 Organism Name
 Cricetidae
 Taxa Notes
 Animals, Chordates, Mammals, Nonhuman Vertebrates,
 Nonhuman Mammals, Rodents, Vertebrates
 REGISTRY NUMBER: 301-02-0 (OLEAMIDE)

L30 ANSWER 10 OF 14 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
 STN
 ACCESSION NUMBER: 1997:95938 BIOSIS Full-text
 DOCUMENT NUMBER: PREV199799395141

TITLE: The sleep induction lipid oleamide blocks gap junction communication but not calcium wave transmission in glial cells.

AUTHOR(S): Guan, X. J. [Reprint author]; Cravatt, B. F.; Ehring, G. R.; Hall, J. E.; Boger, D. L.; Lerner, R. A.; Gilula, N. B. [Reprint author]

CORPORATE SOURCE: Dep. Cell Biol., The Scripps Res. Inst., La Jolla, CA 92307, USA

SOURCE: Molecular Biology of the Cell, (1996) Vol. 7, No. SUPPL., pp. 280A.
Meeting Info.: Annual Meeting of the 6th International Congress on Cell Biology and the 36th American Society for Cell Biology. San Francisco, California, USA. December 7-11, 1996.
CODEN: MBCEEV. ISSN: 1059-1524.

DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)

LANGUAGE: English

ENTRY DATE: Entered STN: 3 Mar 1997
Last Updated on STN: 2 Apr 1997

CONCEPT CODE: General biology - Symposia, transactions and proceedings 00520
Cytology - Animal 02506
Biochemistry studies - General 10060
Biophysics - General 10502
Nervous system - General and methods 20501

INDEX TERMS: Major Concepts
Biochemistry and Molecular Biophysics; Cell Biology;
Nervous System (Neural Coordination)

INDEX TERMS: Chemicals & Biochemicals
OLEAMIDE; CALCIUM

INDEX TERMS: Miscellaneous Descriptors
CALCIUM WAVE TRANSMISSION; GAP JUNCTION; GAP JUNCTION COMMUNICATION; GLIAL CELL; MEMBRANES; NERVOUS SYSTEM; OLEAMIDE; SLEEP INDUCING LIPID

ORGANISM: Classifier
Felidae 85770
Super Taxa
Carnivora; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
cat
Taxa Notes
Animals, Carnivores, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates

REGISTRY NUMBER: 301-02-0 (OLEAMIDE)
7440-70-2 (CALCIUM)

L30 ANSWER 11 OF 14 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 1996:204353 BIOSIS Full-text

DOCUMENT NUMBER: PREV199698760482

TITLE: An endogenous sleep-inducing lipid activates intercellular calcium waves in glial cells.

AUTHOR(S): Charles, A. C. [Reprint author]; Cravatt, B. F.; Boger, D. L.; Gilula, N. B. [Reprint author]; Lerner, R. A.

CORPORATE SOURCE: Dep. Neurol., UCLA, Los Angeles, CA 90095, USA

SOURCE: Journal of Neurochemistry, (1996) Vol. 66, No. SUPPL. 1, pp. S75.

Meeting Info.: 27th Annual Meeting of the American Society
for Neurochemistry. Philadelphia, Pennsylvania, USA. March
2-6, 1996.

CODEN: JONRA9. ISSN: 0022-3042.

DOCUMENT TYPE:

Conference; (Meeting)

Conference; Abstract; (Meeting Abstract)

LANGUAGE:

English

ENTRY DATE:

Entered STN: 2 May 1996

Last Updated on STN: 2 May 1996

CONCEPT CODE:

General biology - Symposia, transactions and proceedings
00520

Cytology - Animal 02506

Behavioral biology - Animal behavior 07003

Biochemistry methods - Proteins, peptides and amino acids
10054

Biochemistry studies - Proteins, peptides and amino acids
10064

Biochemistry studies - Minerals 10069

Biophysics - Molecular properties and macromolecules
10506

Biophysics - Membrane phenomena 10508

Metabolism - Minerals 13010

Metabolism - Proteins, peptides and amino acids 13012

Endocrine - Neuroendocrinology 17020

Nervous system - General and methods 20501

Nervous system - Physiology and biochemistry 20504

Psychiatry - Psychophysiology 21003

INDEX TERMS:

Major Concepts

Behavior; Biochemistry and Molecular Biophysics; Cell
Biology; Endocrine System (Chemical Coordination and
Homeostasis); Membranes (Cell Biology); Metabolism;
Nervous System (Neural Coordination)

INDEX TERMS:

Chemicals & Biochemicals

CALCIUM

INDEX TERMS:

Miscellaneous Descriptors

CELLULAR SIGNAL; CIS-9,10-OCTADECENOAMIDE; MEETING
ABSTRACT; RAT BRAIN

ORGANISM:

Classifier

Muridae 86375

Super Taxa

Rodentia; Mammalia; Vertebrata; Chordata; Animalia

Organism Name

Muridae

Taxa Notes

Animals, Chordates, Mammals, Nonhuman Vertebrates,
Nonhuman Mammals, Rodents, Vertebrates

REGISTRY NUMBER:

7440-70-2 (CALCIUM)

L30 ANSWER 12 OF 14 CONFSCI COPYRIGHT 2006 CSA on STN

ACCESSION NUMBER: 96:27175 CONFSCI

DOCUMENT NUMBER: 96-039048

TITLE:

Endogenous sleep-inducing lipid activates intercellular
calcium waves in glial cells

AUTHOR:

Charles, A.C.; Cravatt, B.F.; Boger, D.L.;
Gilula, N.B.; Lerner, R.A.

CORPORATE SOURCE:

Dep. Neurology, UCLA, Los Angeles, CA 90095, USA

SOURCE:

American Society for Neurochemistry, 301 University
Boulevard, MRB 2.143, Galveston, TX 77555-1069, Abstracts
and full papers available..
Meeting Info.: 961 0209: 27th Annual Meeting of the

American Society for Neurochemistry (9610209). Philadelphia
 , PA (USA). 2-7 Mar 1996. American Society for
 Neurochemistry.

DOCUMENT TYPE: Conference
 FILE SEGMENT: DCCP
 LANGUAGE: English
 CLASSIFICATION: 2500 CHEMISTRY AND CHEMICAL ENGINEERING

L30 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:569722 CAPLUS Full-text

DOCUMENT NUMBER: 135:164083

TITLE: Characterization of mammalian fatty acid amide
 hydrolases and their role in the metabolism of
 soporific fatty acid primary amides

INVENTOR(S): Gilula, Norton B.; Cravatt, Benjamin
 F.; Lerner, Richard A.

PATENT ASSIGNEE(S): The Scripps Research Institute, USA

SOURCE: U.S., 72 pp., Cont.-in-part of U.S. Ser. No. 489,535,
 abandoned.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|-------------|
| US 6271015 | B1 | 20010807 | US 1996-743168 | 19961104 |
| CA 2224426 | A1 | 19961227 | CA 1996-2224426 | 19960612 |
| CA 2270293 | A1 | 19980514 | CA 1997-2270293 | 19971104 |
| WO 9820119 | A1 | 19980514 | WO 1997-US20385 | 19971104 |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| AU 9854321 | A | 19980529 | AU 1998-54321 | 19971104 |
| AU 739962 | B2 | 20011025 | | |
| EP 970195 | A1 | 20000112 | EP 1997-948210 | 19971104 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| JP 2001503630 | T | 20010321 | JP 1998-521812 | 19971104 |
| US 2002187542 | A1 | 20021212 | US 2001-894790 | 20010628 |
| US 6699682 | B2 | 20040302 | | |
| AU 781382 | B2 | 20050519 | AU 2002-13606 | 20020125 |
| US 2004265958 | A1 | 20041230 | US 2004-788992 | 20040226 |
| PRIORITY APPLN. INFO.: | | | | |
| | | | US 1995-489535 | B2 19950612 |
| | | | WO 1996-US10435 | A2 19960612 |
| | | | US 1996-743168 | A 19961104 |
| | | | AU 1998-54321 | A3 19971104 |
| | | | WO 1997-US20385 | W 19971104 |
| | | | US 2001-894790 | A3 20010628 |

ED Entered STN: 07 Aug 2001

AB The soporific activity of cis-9,10-octadecenoamide and other soporific fatty acid primary amides is neutralized by hydrolysis in the presence of fatty acid amide hydrolase (FAAH, also known as cis-9,10-octadecenoamidase or oleamide amidase). Hydrolysis of cis-9,10-octadecenoamide by FAAH leads to the formation of oleic acid, a compound without soporific activity. FAAH was isolated and the gene encoding rat, mouse, and human FAAH was cloned, sequenced, and used to express recombinant FAAH. Inhibitors of FAAH are disclosed to block the hydrolase activity.

IC ICM C12N009-80

INCL 435228000

CC 7-2 (Enzymes)

Section cross-reference(s): 1, 3

ST fatty acid amide hydrolase

soporific metab mammal; sequence fatty acid

amide hydrolase cDNA mammal

IT 153301-19-0P, Fatty acid amide hydrolase

RL: BAC (Biological activity or effector, except adverse); BPN

(Biosynthetic preparation); BPR (Biological process); BSU (Biological

study, unclassified); PRP (Properties); BIOL (Biological study); PREP

(Preparation); PROC (Process)

(characterization of mammalian fatty acid amide hydrolases and their role in the metabolism of soporific fatty acid primary amides)

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 14 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:324876 CAPLUS Full-text

DOCUMENT NUMBER: 129:25077

TITLE: Cloning of mammalian fatty-acid amide hydrolases active on octadecenoamide sleep inducers

INVENTOR(S): Gilula, Norton B.; Cravatt, Benjamin F.; Lerner, Richard A.

PATENT ASSIGNEE(S): Scripps Research Institute, USA

SOURCE: PCT Int. Appl., 151 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|----------|
| WO 9820119 | A1 | 19980514 | WO 1997-US20385 | 19971104 |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| US 6271015 | B1 | 20010807 | US 1996-743168 | 19961104 |
| CA 2270293 | A1 | 19980514 | CA 1997-2270293 | 19971104 |
| AU 9854321 | A | 19980529 | AU 1998-54321 | 19971104 |
| AU 739962 | B2 | 20011025 | | |
| EP 970195 | A1 | 20000112 | EP 1997-948210 | 19971104 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| JP 2001503630 | T | 20010321 | JP 1998-521812 | 19971104 |

| | | | | |
|------------------------|----|----------|-----------------|-------------|
| AU 781382 | B2 | 20050519 | AU 2002-13606 | 20020125 |
| PRIORITY APPLN. INFO.: | | | US 1996-743168 | A 19961104 |
| | | | US 1995-489535 | B2 19950612 |
| | | | AU 1998-54321 | A3 19971104 |
| | | | WO 1997-US20385 | W 19971104 |

OTHER SOURCE(S): MARPAT 129:25077

ED Entered STN: 01 Jun 1998

AB The soporific activity of cis-9,10-octadecenoamide and other soporific fatty-acid primary amides is neutralized by hydrolysis in the presence of fatty-acid amide hydrolase (FAAH). Hydrolysis of cis-9,10-octadecenoamide by FAAH leads to the formation of oleic acid, a compound without soporific activity. FAAH was isolated and the gene encoding FAAH was cloned, sequenced, and used to express recombinant FAAH. FAAH was purified from rat liver (20-30-fold enriched, 10-15% yield) by 4 steps of column chromatog. CDNAs were isolated from rat, mouse, and human, and their nucleotide and deduced amino acid sequence provided. Inhibitors of FAAH are disclosed to block the hydrolase activity.

IC ICM C12N009-78

ICS C12N009-80; C12N009-14; C12P007-64; A16K038-46

CC 7-2 (Enzymes)

Section cross-reference(s): 1, 3

IT 183869-93-4P 186814-44-8P 189122-02-9P, Fatty acid
amide hydrolase (human) 208065-35-4P, Amidase (mouse)

RL: BAC (Biological activity or effector, except adverse); BPN
(Biosynthetic preparation); BSU (Biological study, unclassified); PRP
(Properties); PUR (Purification or recovery); THU (Therapeutic use); BIOL
(Biological study); PREP (Preparation); USES (Uses)
(amino acid sequence; cloning of mammalian fatty-acid amide hydrolases
active on octadecenoamide sleep inducers)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

FILE 'HOME' ENTERED AT 11:48:40 ON 27 DEC 2006

SEARCH HISTORY

=> d his nofile

(FILE 'HOME' ENTERED AT 11:28:01 ON 27 DEC 2006)

FILE 'STNGUIDE' ENTERED AT 11:28:11 ON 27 DEC 2006

FILE 'MEDLINE, PASCAL, CABA, WPIX, BIOTECHNO, BIOSIS, LIFESCI, CONFSCI, CAPLUS, DISSABS, EMBASE' ENTERED AT 11:30:54 ON 27 DEC 2006

L1 619 SEA ABB=ON GILULA N/AU OR GILULA NB/AU OR GILULA N B/AU OR
GILULA NORTON?/AU

L2 673 SEA ABB=ON CRAVATT B/AU OR CRAVATT BF/AU OR CRAVATT B F/AU OR
CRAVATT BENJAMIN?/AU

L3 2601 SEA ABB=ON LERNER R/AU OR LERNER RA/AU OR LERNER R A/AU OR
LERNER RICH?/AU

L4 3 SEA ABB=ON FATTY ACID AMINE HYDROLASE

L5 1164 SEA ABB=ON FAAH

L6 35 SEA ABB=ON L1 AND L2 AND L3

L7 250 SEA ABB=ON (L1 OR L2 OR L3) AND (L4 OR L5)

L8 0 SEA ABB=ON (L1 OR L2 OR L3) AND L4

L9 2 SEA ABB=ON L6 AND L5
D KWIC 1-2

L10 1837 SEA ABB=ON FATTY-ACID AMIDE HYDROLASE

L11 331 SEA ABB=ON (L1 OR L2 OR L3) AND L10

L12 2 SEA ABB=ON (L5 OR L10) AND (PY<1995 OR AY<1995 OR PRY<1995)

L13 951241 SEA ABB=ON HYDROLY?

L14 77 SEA ABB=ON L11 AND L13

L15 25 SEA ABB=ON ((L1 AND (L2 OR L3)) OR (L2 AND L3)) AND (L5 OR
L10)

L16 589 SEA ABB=ON MAMMAL? AND (L5 OR L10)

FILE 'MEDLINE, PASCAL, CABA, WPIX, BIOTECHNO, BIOSIS, LIFESCI, CONFSCI, CAPLUS, DISSABS, EMBASE' ENTERED AT 11:41:09 ON 27 DEC 2006

D QUE L12

L17 2 DUP REM L12 (0 DUPLICATES REMOVED)
ANSWER '1' FROM FILE MEDLINE
ANSWER '2' FROM FILE WPIX
D IALL 1
D IALL ABEQ TECH 2

L18 8619 SEA ABB=ON OCTACECENOAMIDE OR ANANDAMIDE OR (MYRISTIC OR
PALMITIC OR STEARIC) (W) AMIDE

L19 171633 SEA ABB=ON VECTOR# AND RECOMB?

L20 309 SEA ABB=ON (L5 OR L10) AND L18(10A) L13

L21 224 SEA ABB=ON (L5 OR L10) AND L18(3A) L13

L22 15 SEA ABB=ON L19 AND (L5 OR L10)

L23 2143366 SEA ABB=ON CHROMATOG?

L24 7 SEA ABB=ON L23 AND L21

L25 20 SEA ABB=ON L23 AND L20
D QUE L22
D QUE L25

L26 34 SEA ABB=ON (L22 OR L25) NOT (L6 OR L15)

L27 20 DUP REM L26 (14 DUPLICATES REMOVED)
ANSWERS '1-10' FROM FILE MEDLINE
ANSWERS '11-14' FROM FILE WPIX
ANSWER '15' FROM FILE BIOTECHNO
ANSWERS '16-17' FROM FILE BIOSIS
ANSWER '18' FROM FILE CAPLUS
ANSWERS '19-20' FROM FILE DISSABS
D IALL 1-10

D IALL ABEQ TECH 11-14
D IALL 15-17
D IBIB ED ABS HITIND 18
D IALL 19-20

FILE 'MEDLINE, PASCAL, CABA, WPIX, BIOTECHNO, BIOSIS, LIFESCI, CONFSCI,
CAPLUS, DISSABS, EMBASE' ENTERED AT 11:46:58 ON 27 DEC 2006

D QUE L12

D QUE L6

D QUE L15

L28 41 SEA ABB=ON (L6 OR L15)
L29 40 SEA ABB=ON L28 NOT (L22 OR L25)
L30 14 DUP REM L29 (26 DUPLICATES REMOVED)
ANSWERS '1-5' FROM FILE MEDLINE
ANSWERS '6-7' FROM FILE WPIX
ANSWERS '8-11' FROM FILE BIOSIS
ANSWER '12' FROM FILE CONFSCI
ANSWERS '13-14' FROM FILE CAPLUS
D IALL 1-5
D IALL ABEQ TECH 6-7
D IALL 8-12
D IBIB ED ABS HITIND 13-14

FILE 'HOME' ENTERED AT 11:48:40 ON 27 DEC 2006

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